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The Elusive Tree Quails of Mexico

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The Elusive Tree Quails of Mexico

By Paul A. Johnsgard

Living in relatively rare and often inaccessible forests, the shy tree quails of Mexico and Central America are among the least known of all quails.

The vernacular name 'quail' usually brings to mind a group of birds with several characteristics in common. Quails are normally small stocky birds with rather short tails, and small beaks adapted to picking up seeds, their principal foods. They are essentially terrestrial, and when frightened normally run as fast as their legs allow, or freeze and burst into flight at the last possible moment. Except during the breeding season, they are found in coveys numbering from about a dozen to several hundred birds, depending on the species.

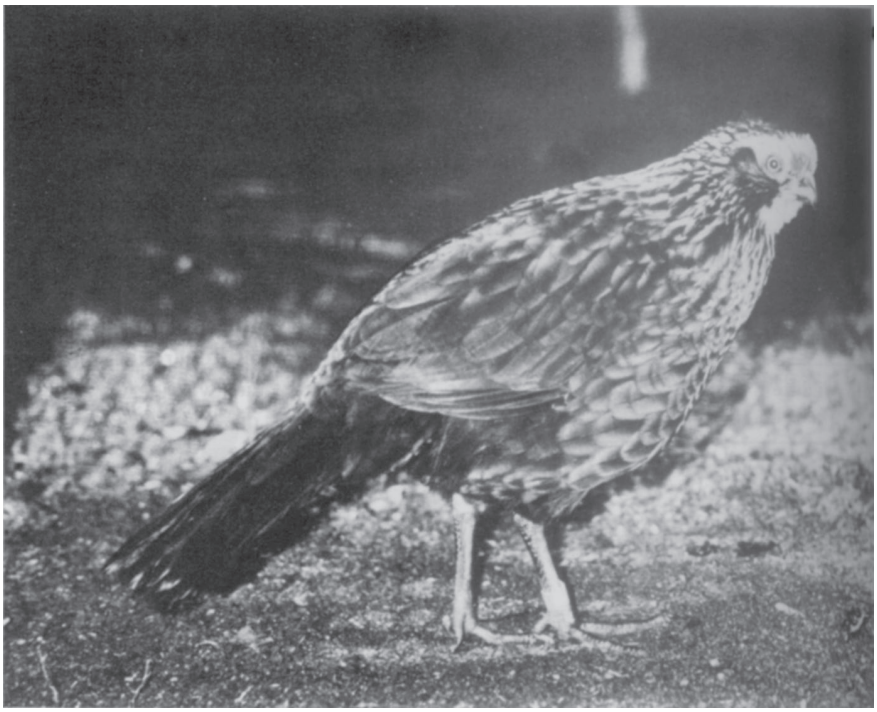
But virtually none of these traits apply to the three species of tree quails or wood-partridges, genus *Dendrortyx*, of Mexico and Central America. They are all surprisingly large — weighing up to one pound in the case of the largest species — and have relatively long tails that result in an overall body length of from 9 to 16 inches. Their beaks are large and heavy, and are related to their abilities to tear apart and consume fruits, flower buds, and similar materials. Although tree quails do forage on the forest floor, they roost in trees and are often found perched on branches. When flushed by a dog they usually fly up into a nearby tree and peer down, uttering grouse-like alarm notes.

Three species of tree quails have been described, all of which occur in moist montane forests, especially the mist-shrouded cloud forests that occur at elevations too high and too cool to support tropical rainforests. These forests, usually lush with bromeliads and epiphytic orchids, are both relatively rare and often inaccessible. Additionally, the birds are exceedingly shy and difficult to see.

So it is not surprising that the tree quails are the least-known of all the North American quail species, and many museums have few or no specimens. The species most commonly found in museums is the largest, the long-tailed tree quail (*D. macroura*), which ranges along the western cordillera from Jalisco to Oaxaca, and eastwards along the Valley of Mexico to Veracruz. In Veracruz it is replaced by a smaller quail (*D. barbatus*), which is known from so few specimens that its range is still highly uncertain. Evidently it extends only from extreme south-eastern San Luis Potosi to central Veracruz. The third species, the buffy-crowned tree quail (*D. leucophrys*), occurs south of the Isthmus of Tehuantepec in the mountains of southern Chiapas, and also extends into Guatemala, Honduras, Nicaragua, and Costa Rica.

Like many birds of the dense tropical forests, tree quails are far more often heard than seen, and at dawn and particularly at dusk the birds sometimes produce a massed chorus that can be almost deafening. In all three species the typical call is a three- or four-syllable whistle which is loud and penetrating. The native Mexican names *chiviscoyo* for the bearded tree quail, or *guachocho* (in Guatemala) and *chirascuá* (in Costa Rica) for the buffy-crowned tree quail, provide a good indication of the cadence characteristics of their calls.

For several years I have been conducting a comparative study of the species of New World quails occurring north of Guatemala, and spent summers in Mexico studying their ecology, distribution, and behavior Additionally I have attempted to obtain live specimens to return to my laboratory, where the birds' behavior can be more conveniently studied and possible data on their breeding biology can be obtained. In Mexico I concentrated



Captive buffy-crowned tree quail (*Dendrortyx leucophrys*), the southernmost of the three species (photo: Ken Fink). Cloud forest (right), lush with bromeliads in oaks (far right), shows the typical moist, montane forest habitat of the tree quails (photos: Paul A. Johnsgard).

on obtaining those species that seemed most feasible to trap effectively and most likely to survive and breed in captivity. Nevertheless, in my request for collecting permits from the Mexican government I optimistically decided to include *Dendrortyx* among the other genera of quail that I thought I might have a reasonable chance of finding. Indeed, I included *Dendrortyx* as a kind of psychological ploy, perhaps similar to that of a bird watcher deciding to visit Funk Island in hopes of adding the great auk to his life list!

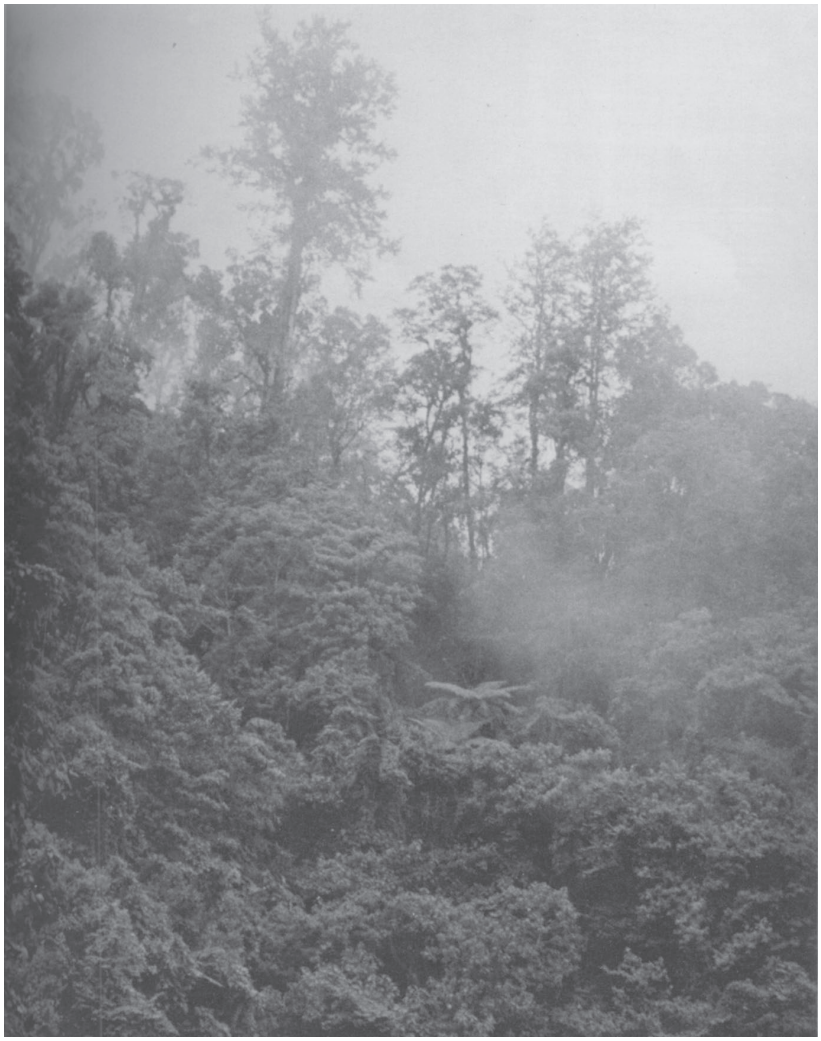
This provided a good excuse to travel into several remote areas of cloud forest that I would not otherwise have attempted to reach, particularly in the case of the bearded tree quail, which has been recorded at only a few localities, and has been seen alive by only a handful of ornithologists. Yet, since the venerable Pan American Highway passes right through the presumptive range of this species, it seemed a good place to start.

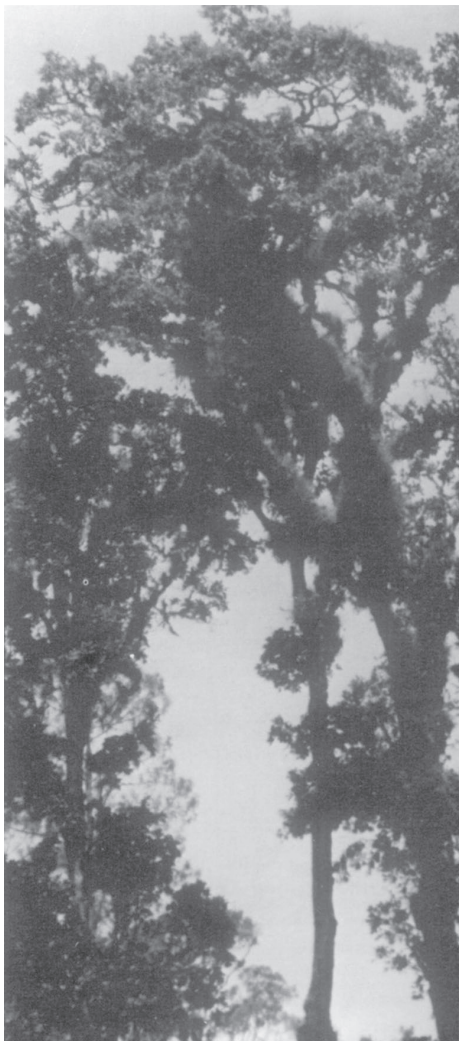
The isolated mountain village of Xilitla, San Luis Potosi, has long been famous for its ornithological attractions, as was well described by James Fisher and Roger Tory Peterson in their *Wild America.* Although they did not record the species, bearded tree quails have been collected nearby, and it was thus my first stop in search of the bird. My assistant, Edmund Sallee, spoke Spanish fluently, and we decided that as tree quails are such fine vocalists there was a chance that they might sometimes be kept as pets by natives in the outlying villages.

After being told in Xilitla that the *gallina del monte* was indeed present in the more remote forests and was sometimes captured by bird trappers who sell songbirds in the local market, my spirits rose considerably. From that point on we simply stopped at every village we encountered near suitable forest habitat, asking everyone we could find whether he knew of anybody who was currently keeping such birds. This procedure was inevitably frustrating and time-consuming. Time and time again we would be led over nearly impassable roads to a hut where, if any birds were being kept at all, they were usually of a passerine species, or perhaps one of the more common parrots. Occasionally we seemed close to success — as when we were told by a woman that she had kept a pair of *gallina del monte* until a few weeks ago, when she had sold them; and in another instance some birds had been in a hanging cage that had recently fallen and broken, allowing them to escape.

After a series of such frustrations, I was inclined to regard the bearded tree quail as not much more than a mythological creature, and ready to concentrate on more substantive matters. Then, late one afternoon in central Hidalgo, we stopped the car to inquire directions from two campasinos who were walking along the road. Ed spent a few minutes chatting with them, and discovered the incredible fact that a woman in the next village just happened to have five tree quails! I received the news with astonishment, since to my knowledge there were no records of bearded tree quails from Hidalgo, and surely nobody would be keeping as many as five. But we rushed off to the village, Puerto El Rayo, located the house, and there, suspended above the pig trough, were three hand-made cages containing five bearded tree quails!

The birds were looking rather shabby, with most of the feathers on their heads worn away by abrasion



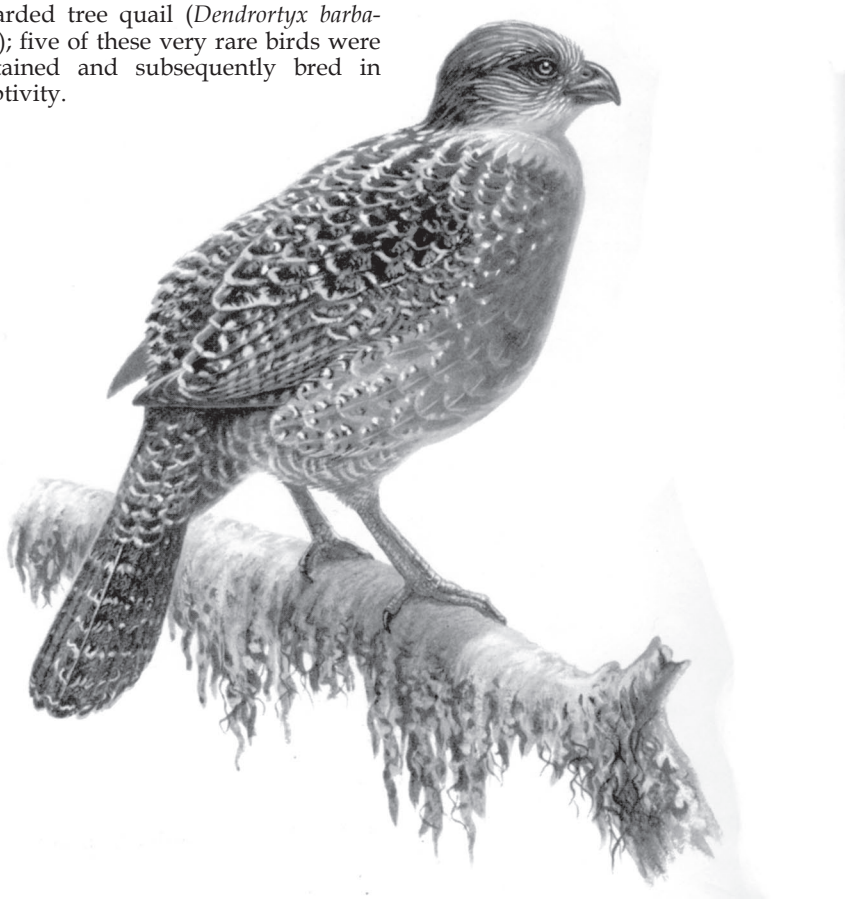


against the tops of the small cages. The *señora* told us that they had been caught as chicks the previous year, and consisted of two pairs plus an extra female. She also said that one of the females (which were slightly smaller but otherwise identical to the males) had laid a few eggs that had simply fallen through the cage bottom. We asked whether she might part with the birds, but she stated quite firmly that she would not, since her family so enjoyed their morning and evening songs. She said that all five birds sang in concert, which surprised me, since it had previously been believed that only the males sang. As it was getting late, we told her we would return the next day and try to record their song.

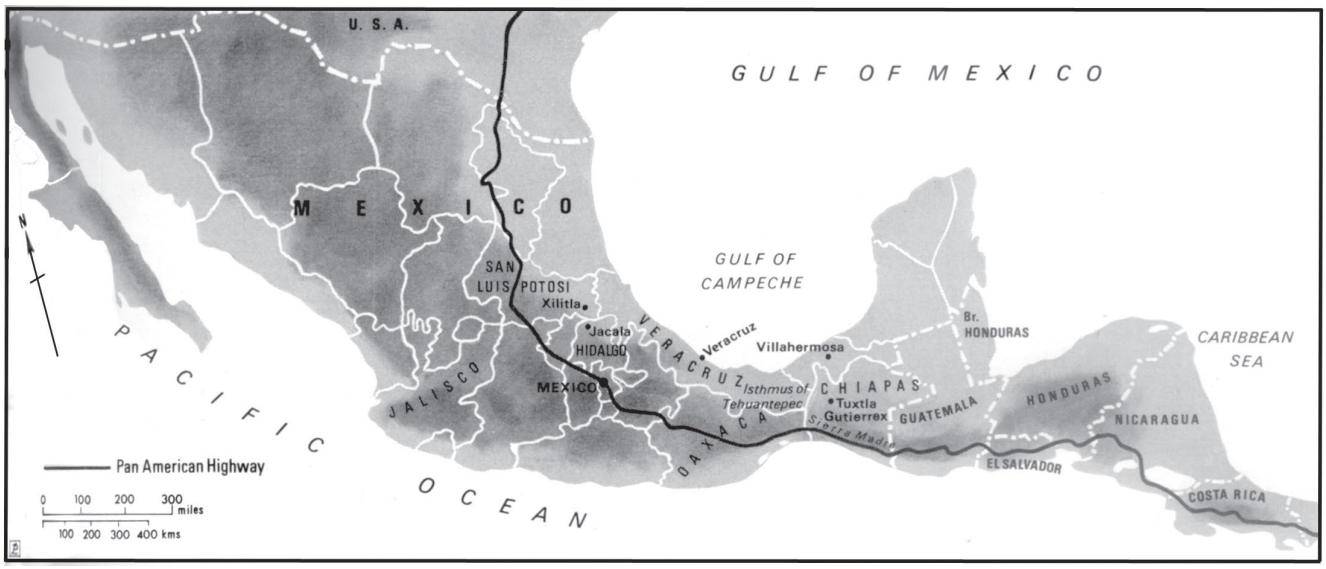
After spending the night at Jacala, we drove back early the next morning. But the disturbance when we arrived, caused by the barking of the omnipresent mongrel dogs, effectively eliminated any hopes of recording the birds. However, after considerable persuasion the owner finally agreed to part with them, and we triumphantly left, the owners of more bearded tree quails than I had seen in all the museum collections I had ever visited. We had been told by the *señora* that their food consisted of soaked corn and black beans. We found that, although corn and beans were certainly eaten, the birds particularly liked fresh fruits such as bananas and grapes, which they tore apart with their beaks. While travelling in the car, the birds 'conversed' in low tones, and sometimes uttered low, rattling alarm notes. Not surprisingly, however, they failed to produce their evening or dawn chorus, no doubt because of their new surroundings and the frequent disturbances associated with travel. Wherever we stopped, the birds caused great interest among the Mexicans. They were usually identified as 'eagles', no doubt because of their fairly large beaks, and perhaps their 'bald' appearance caused by the lack of crown feathers!

In order to study to what extent separation and individual recognition might be important in their chorus activity, I decided to separate the females from the males, and placed them out of sight of each other in adjoining rooms. This accomplished, I set up the tape recorder microphone near the cages containing the males, and left the room. Within about 15 minutes one of the females began to utter some very faint notes, which were immediately answered by one of the males. This rapidly developed into a loud and alternated call-and-answer

Long-tailed tree quail (*Dendrortyx macroura*), the largest of the three species and the one most commonly seen in museums.



Bearded tree quail (*Dendrortyx barbatus*); five of these very rare birds were obtained and subsequently bred in captivity.



series of vocalizations, and the other pair soon joined in, producing a tremendous din. The male's call, sounding like *ko-orr-EE-EE,* was louder, lower pitched than the female's, and consisted of three or four syllables. The female's answer was more drawn out and the notes more uniform in amplitude, sounding like *ko-or-ee-ee-ee-eee.* This chorus lasted at least 10 minutes, when I had to enter the room to attend to the recorder. In spite of my presence the males continued to pace their cages and call loudly, even though the females had become silent.

A typical dawn chorus did not occur for about two weeks, when we happened to stop at a motel that provided an enclosed garage. To give the tree quails maximum privacy, we put them in the garage with a supply of food and water. At about 5:30 the following morning I was awakened by a chorus of song from the garage, which sounded quite similar to the separation chorus I had produced earlier. This concert lasted nearly 20 minutes, by which time it was fairly light outside. Like the earlier separation chorus, at least some of the females obviously participated in the calling.

Later, when we spent a few weeks in Chiapas, we put the birds in a large flight cage in the zoo at Tuxtla Gutierrex, where they could better exercise and dust-bathe. After a few days of adjustment, they again began to sing from their roosting places in a low tree. It would seem that the function of such daily concerts is not so much a proclamation of territory as the announcement of the location of each individual bird to all of its neighbors. Such evening choral singing possibly serves to allow birds to gather together for communal roosting, since during the daytime they are normally found only in pairs or family-sized groups of about four to six birds. The possible function of the dawn chorus is less obvious, but it is interesting that chachalacas (*Ortalis* spp.), which occupy similar habitats and are somewhat similar in their ecology, perform comparable dusk and dawn singing in concert.

Singing by tree quails is reported to be especially prevalent during the breeding season, suggesting that perhaps unmated males might be particularly prone to announce their locations at that time. Breeding in all three species evidently occurs during the wetter spring and summer months, although few nests have actually been described. Nests of the long-tailed tree quail have been found in mid-April and early July, and chicks of the bearded tree quail have been collected in June. Judging from records of buffy-crowned tree quail chicks collected in Honduras between April and July, a similar wet-season breeding period is probably true for it as well.

The only nests so far located for any wild tree quails are three long-tailed tree quail nests. Dr. Dwaine Warner discovered the first of these in a semi-open conifer forest on a very steep slope and amid a tangle of brush. Dead branches in this tangle jutted out over a 2-foot-high rock face, forming a sloping roof over a cavity some 3 or 4 feet long and 2 feet wide. A mat of dead twigs, branches, and leaves formed a heavy and light-impervious roof above, and a single opening about 6 inches wide led to the nest, which was a shallow depression lined with fine grasses. Two additional nests were found by the late J. S. Rowley in Oaxaca. Unlike the nest found by Dr. Warner, both were poorly concealed and contained four rather than six eggs. Since as many as five to seven young birds have been seen following their presumed mothers, it must be assumed that large clutches do at times occur, although according to natives three or four eggs represent the usual number. The incubation period and the possible participation of the male in incubation and care of the young are still unknown. The eggs of the bearded tree quail are still not represented in museum collections, but those of the other two species are described as buffy, reddish buff, or cream-colored, with reddish brown spots.

In spite of traveling through several areas which the long-tailed tree quail has been known to inhabit, I was not fortunate enough to observe any birds or even to hear the songs. Dr. Warner has reported that its chorus is relatively rarely heard, and is limited to the breeding period, while J. S. Rowley indicated that most singing occurs in late evening, and although most frequent in the spring, is also heard to some extent throughout the year.

The range of the buffy-crowned tree quail in Mexico has been generally believed to be limited to the Sierra Madre de Chiapas of extreme southern Chiapas near the Guatemalan border. There it is found in the cloud forest zone in association with three other rare birds, the black chachalaca (*Penelopina nigra*), the rarely observed horned guan (*Oreophasis derbianus*), and the magnificent quetzal (*Pharomachrus mocinno*). Even in preferred habitats the buffy-crowned tree quail is relatively rare; L. Irby Davis estimated that only one pair was present in a

15-acre area of mature pine/oak forest near San Cristobal de Chiapas. In this beautiful bromeliad-draped forest it occurs in association with the more common but equally interesting singing quail (*Dactylortyx thoracicus*), appropriately named for its melodious and complex vocalizations. On several occasions I visited this forest, which is now being badly encroached and increasingly ravaged by lumbering activities, but was never able to see or hear the bird.

Conversations with Sr. Miguel Alvarez del Toro, the highly qualified zoologist in charge of the museum and zoo in Tuxtla Gutierrex and the foremost authority on the birds of Chiapas, convinced me that the buffy-crowned tree quail also occurs in the interior of Chiapas in the remote mountains between Tuxtla and Villahermosa. Only a single road, which during the wet season is often nearly impassable, crosses these mountains, but it provides some of the most spectacular views of cloud forest still to be found in Mexico. Sr. Alvarez del Toro informed me that he had learned of a live tree quail being brought into a mission school not far from Jitotol, so we again followed the procedure of stopping periodically in this area and inquiring about the bird. Several persons assured us that the *gallina del monte* does occur in the area, and one resident of Tapilula who had captive chachalacas and other gallinaceous birds was obviously quite familiar with the species. He informed us that he had sometimes bought young tree quails from natives who brought them in for him, but found them too difficult to rear to be worth the effort.

In spite of our hopes, we were unable to obtain any more than our original five bearded tree quails. Shipping them out of Mexico to New York for quarantine was a special problem, for not only were the birds considerably larger than our other quails, but also we were quite certain that they would be unable to go without water for more than a few days. After obtaining some special reed baskets that appeared to be ideal shipping crates, we decided that the only way to solve the problem of food and water would be to provide the birds with bunches of grapes wired on the inside of each basket at eye-level. This provision was probably crucial to their survival. We later learned that the birds had been held without additional food or water at the Mexico City airport for five days, while the authorities there were checking to make certain that all of our permits were in order. Finally, the birds were released and sent on to New York, none the worse for the long delay. From these birds and the others that were obtained in Mexico we have learned a considerable amount about their behavior and breeding biology.

One of the bearded tree quail pairs nested during the summer of 1971 — the first time that any species of this group has been known to breed in captivity. They excavated a depression in a corner of their cage, and concealed it with pieces of dead palm leaves that were present nearby. The male apparently helped construct the nest, and during the egg-laying period began to call every morning at about 7:00 a.m., uttering a series of *hoy-eee* notes that were repeated up to 40 times. The female laid a total of 16 eggs, which were removed as soon as they were deposited. These eggs, the first ever to be obtained for this species, were a uniform dirty white. Five of the eggs hatched after incubation periods of 28 to 30 days, or longer than the reported incubation period of any other quail species. A sixth chick was helped from its shell after 32 days, but did not survive long. Three of the remaining chicks were successfully reared, and provide additional sources of information on moults and age of maturity. Thus, after many anxious moments and unforgettable experiences, we managed to illuminate some of the facets of the biology and life history of one of the rarest and least-known birds of Mexico.

Paul A. Johnsgard is a professor of zoology at the University of Nebraska. From 1968 to 1971 he devoted his research time to a comprehensive survey of the biology of grouse and quails, resulting in his latest book, *Grouse and Quails of North America*. He contributed an article on the torrent ducks of the Andes to our February issue this year.